FIG. 1

Mgmt Interfaces   PhyCard   PhyCard   Control Bus   PhyCard

Central Computing Card   Line Card   Line Card   ...   Line Card

Fabric Interconnect

18   14   14   16   20   12

FIG. 2

ROUTER   14   16   Protection   16   ROUTER   14   12

Fabric   IP   Line Card   Physical Card   Chan. 1   Physical Card   Line Card   IP   Fabric

IP   Line Card   Physical Card   Chan. 2   Physical Card   Line Card   IP

IP   Line Card   Physical Card   Chan. 3   Physical Card   Line Card   IP

10   10

FIG. 3

Line Card   Physical Card   Protection A   Physical Card   Line Card

Fabric   Line Card   Physical Card   Working B   Physical Card   Line Card   Fabric

Line Card   Physical Card   Working C   Physical Card   Line Card
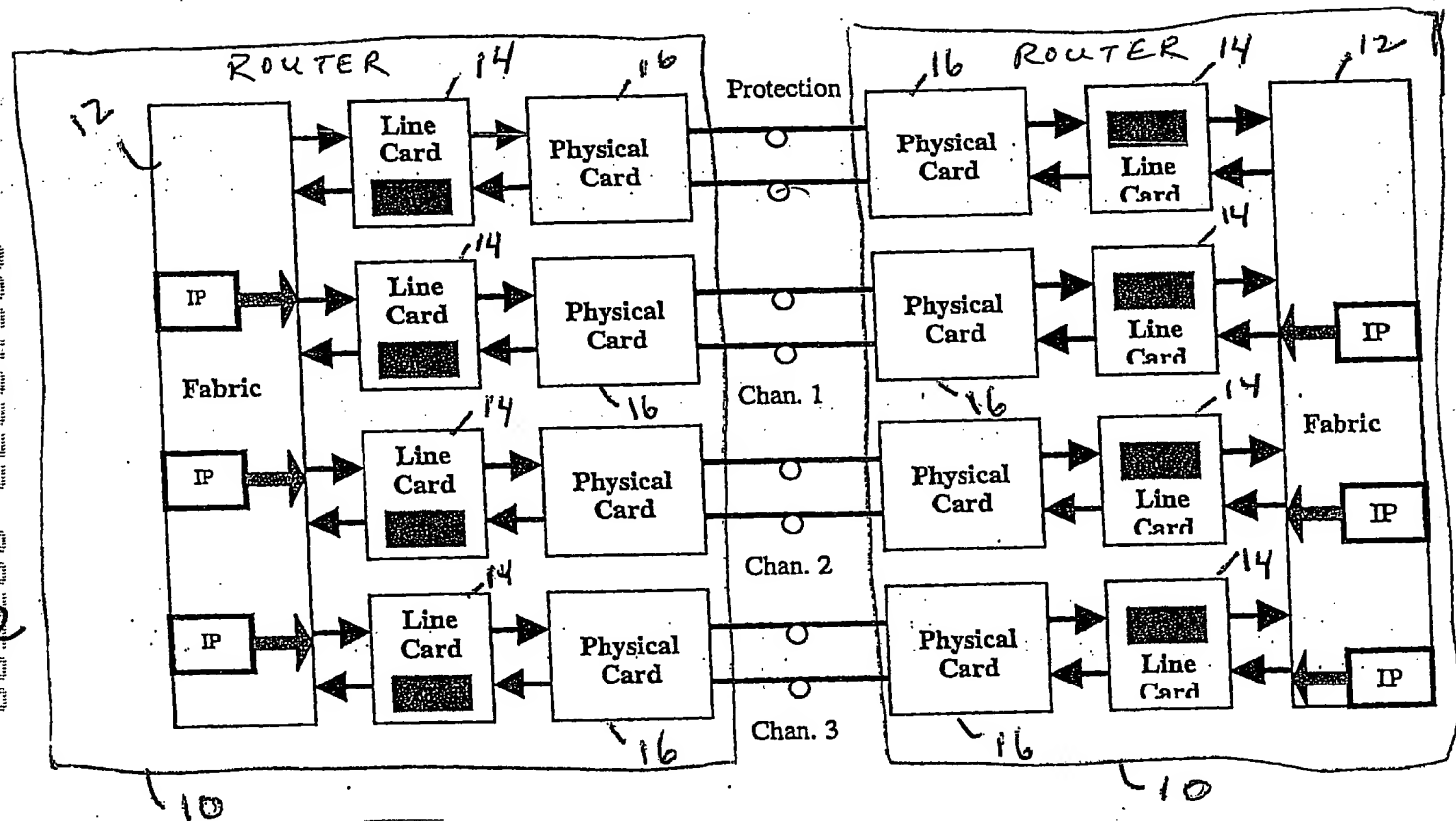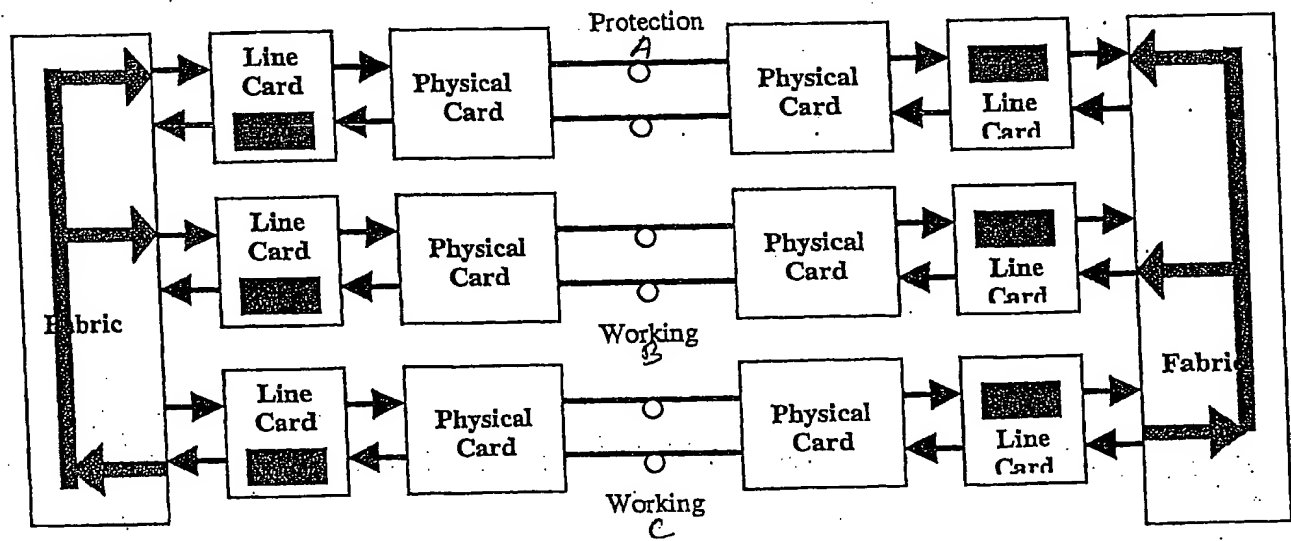
Configure line cards
(Protection line card configured same as Working line card) — 100

Enable multicast and unicast bridge — 102

Detect working line card failure — 104

106 — Disable working card's physical card interface

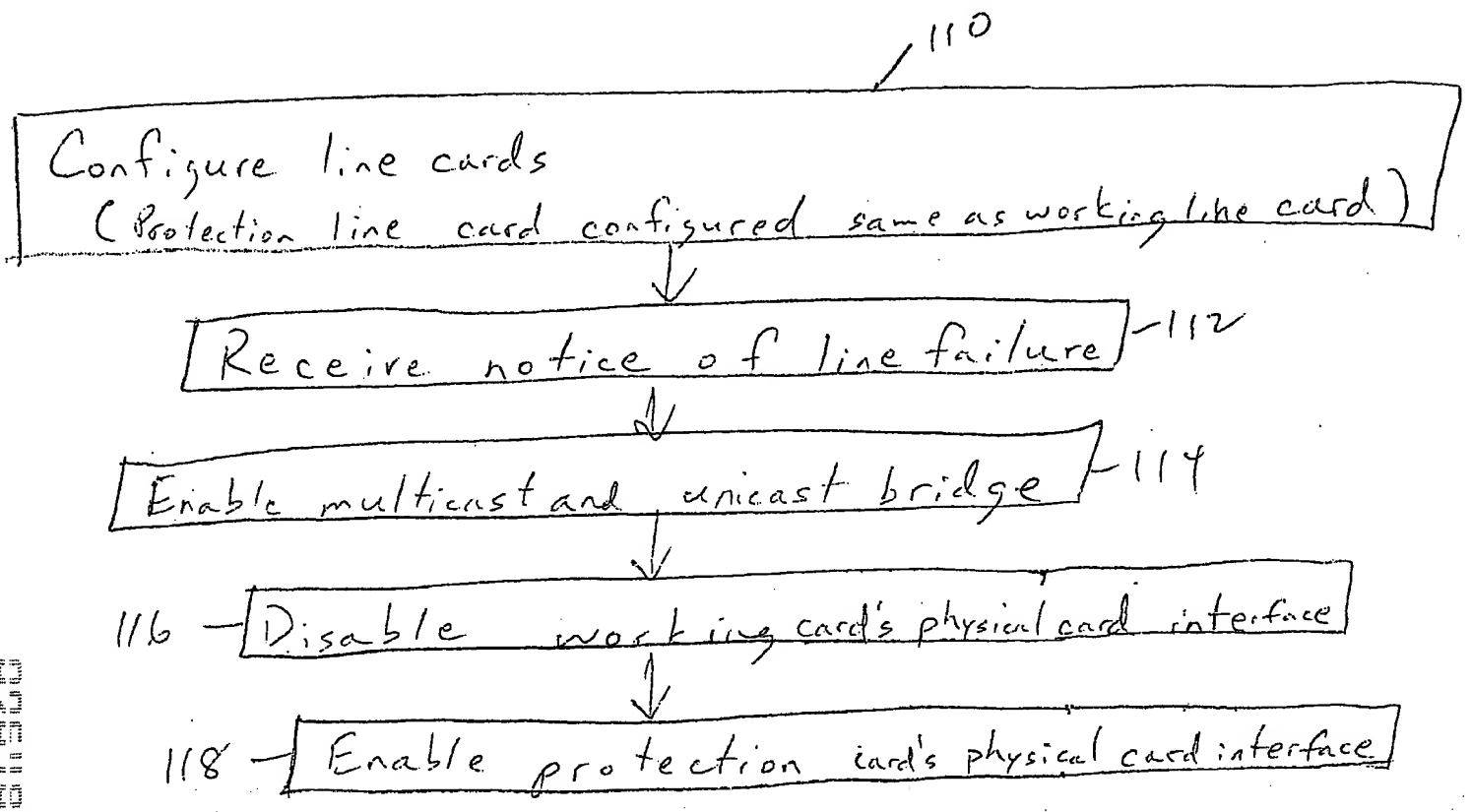108 — Enable protection card's physical card interface

FIG. 4

Configure line cards /110
(Protection line card configured same as working line card)

Receive notice of line failure /112

Enable multicast and unicast bridge /114

116 — Disable working card's physical card interface

118 — Enable protection card's physical card interface

FIG. 5

Configure line cards
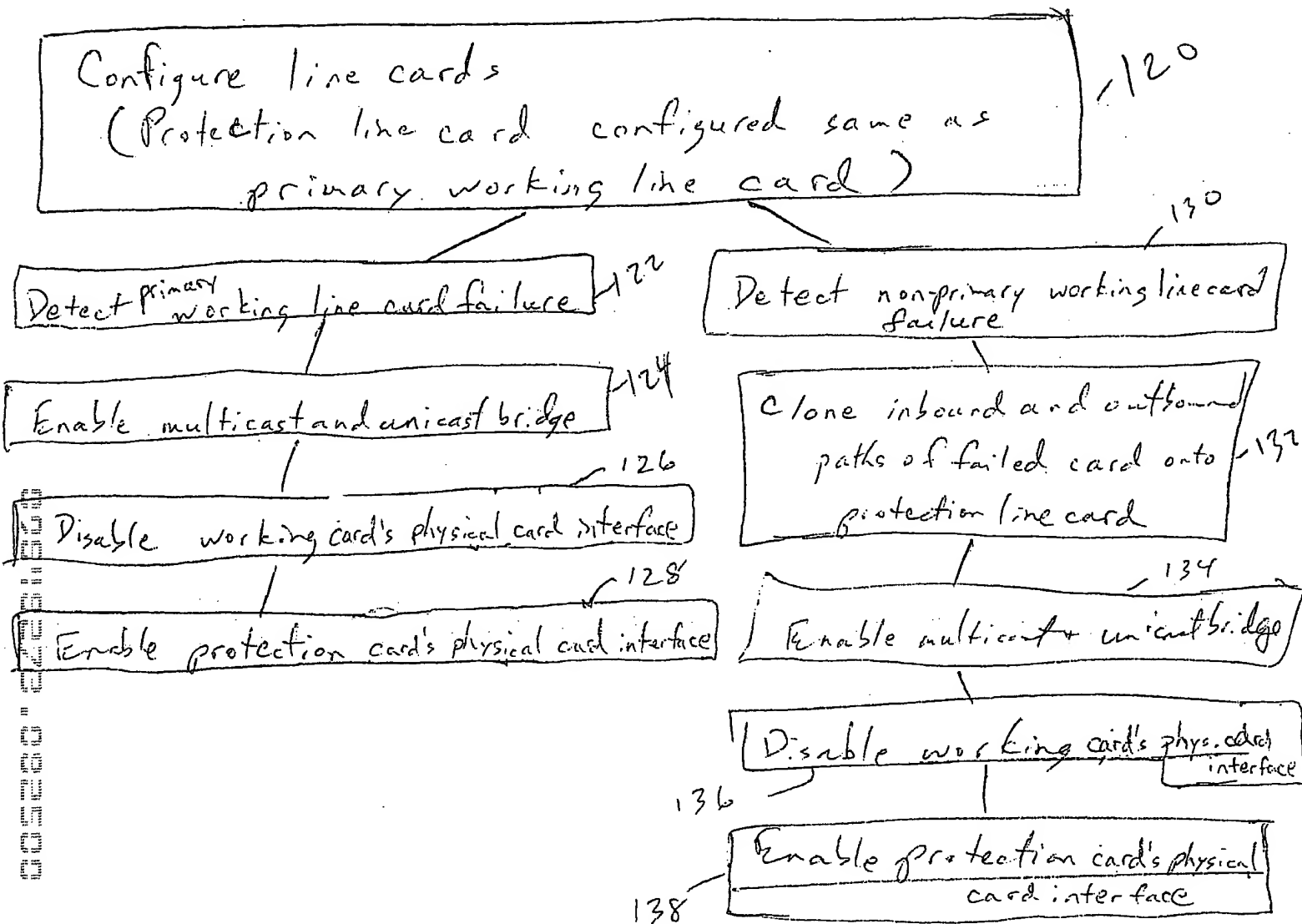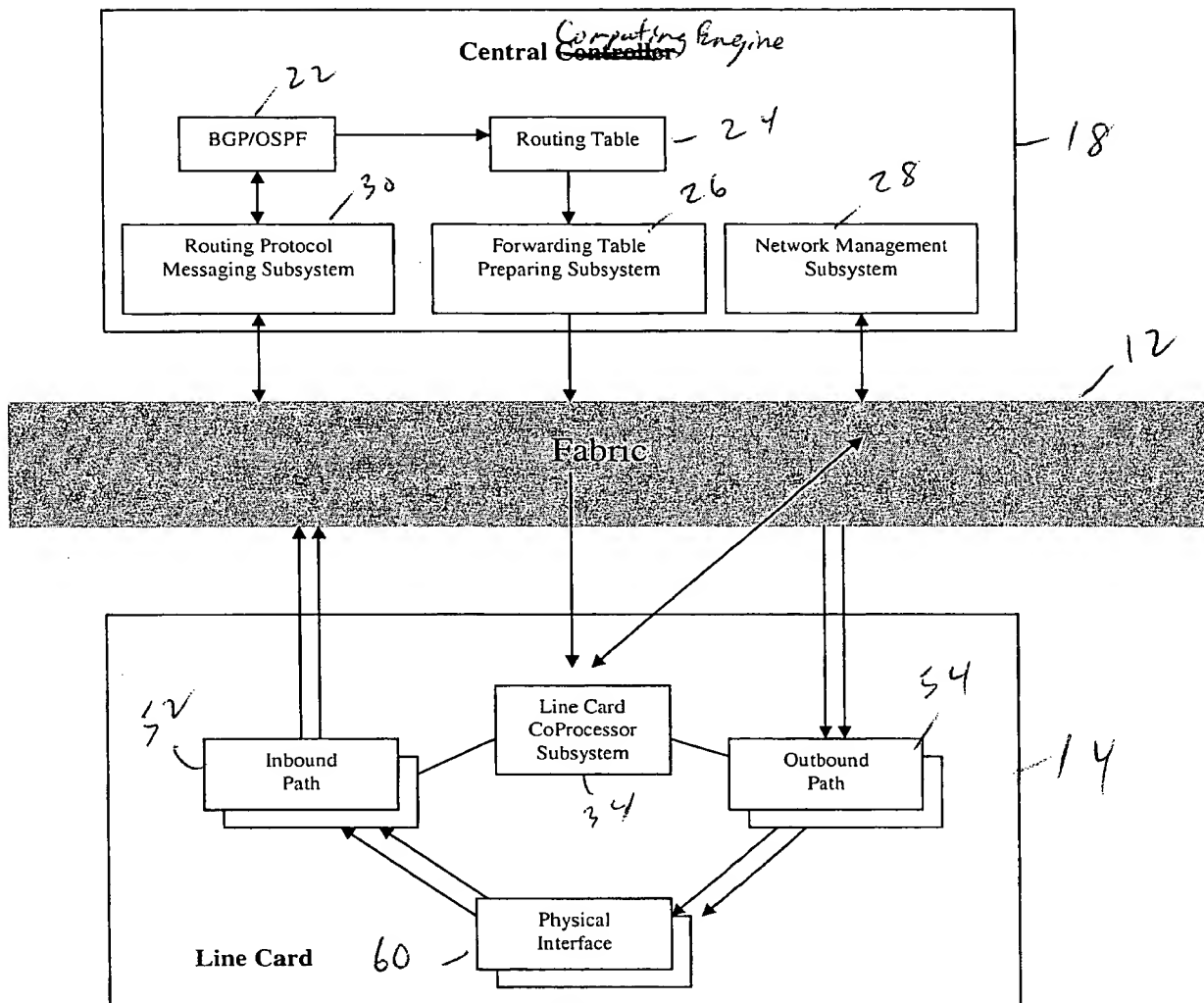(Protection line card configured same as
primary working line card) — 120

Detect primary working line card failure — 122

Enable multicast and unicast bridge — 124

Disable working card's physical card interface — 126

Enable protection card's physical card interface — 128

Detect nonprimary working line card failure — 130

Clone inbound and outbound paths of failed card onto protection line card — 132

Enable multicast + unicast bridge — 134

Disable working card's phys. card interface — 136

Enable protection card's physical card interface — 138

FIG 6

Central ~~Controller~~ *Computing Engine*

BGP/OSPF — *22*

Routing Table — *24* — *18*

30

Routing Protocol Messaging Subsystem

Forwarding Table Preparing Subsystem — *26*

Network Management Subsystem — *28*

12

Fabric

Line Card CoProcessor Subsystem — *54*

32

Inbound Path

34

Outbound Path — *14*

Physical Interface

Line Card — *60*

Figure 7

FIG. 8